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COMPLETE SPECIFICATION.

Sewing Thread for Surgical Purposes.

We, CARL LÜTGENAN and THEODOR SCHIRENS, M.D., trading as Lütgenan & Co., Manufacturers, of 34, Carlsplatz, Krefeld, Germany, do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

5 This invention relates to thread for surgical purposes, and more especially to thread combined with celluloid. Instead of thread specially made for surgical purposes, any other thread capable of being steeped with celluloid may be employed.

10 Attempts have already been made to employ thread twisted in the ordinary way for surgical dressings, but these attempts were however generally unsuccessful because this thread easily becomes swollen, untwisted and mixed, and moreover becomes affected to so high a degree by traumatic secretions, thereby often causing suppurations in the places through which it passes.

15 These disadvantages are obviated in the most thorough manner by this celluloid thread. The flaxen thread when in the sterilised state is soaked with celluloid by the following process;—

20 After having been boiled several times in a steriliser in an appropriate solution hereafter described, the twisted thread (*i.e.* thread which has been spun and doubled in the ordinary way) is washed in sterilised water and then dried rapidly between cloths free from germs. The solution used for sterilising the thread is preferably a solution of soda but any solution serving the same purpose may be employed. The strength of the soda solution is usually 1 *per cent.* but we do not claim this sterilisation as part of our said invention. The thread is next thoroughly saturated in a solution of celluloid prepared in any convenient
25 manner, acetone being the dissolvent used. It is impossible to state precisely how much of the latter should be used for any given quantity of celluloid inasmuch as the proportions depend on the nature and quality of the celluloid and the strength of the dissolvent. It may be stated by way of example that one parts of celluloid dissolved in 100 parts of acetone the former being of average
30 quality and the latter of average strength, would answer the purpose. The process is finally completed by ironing the thread, *i.e.* pressing it between rollers or cylinders (not heated) in order to remove any roughness and make the thread run smoothly in use.

35 The celluloid thread prepared in this way may be packed in wrappers or put into bottles containing a solution of sublimate or carbolic acid, or any other disinfectant for the purpose of preserving it.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed we declare that what we claim is:—

40 Sewing thread for surgical purposes consisting of twisted or other suitable thread characterised by its being thoroughly saturated, when in the sterilized

[*Price 8d.*]

Lütgenan and Schren's Sewing Thread for Surgical purposes.

state, in a solution of celluloid, after having been previously sterilized and cleansed of objectionable substances or germs. Substantially as herein described and explained.

Dated this 14th day of September 1899.

S. S. BROMHEAD,
Agent for Applicant,
33, Cannon Street, London, E.C.

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